APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,348	12/08/2003	Douglas P. Brown	NCR 11167	1760

26890   7590   08/24/2007
JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ3
DAYTON, OH 45479

EXAMINER
WILSER, MICHAEL P

ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
08/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/730,348	BROWN ET AL.
	Examiner	Art Unit	
	Michael Wilser	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 December 2003</u>.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-48* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-48* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>December 8, 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-48 are pending in this application.

Specification

2.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3.   The disclosure is objected to because of the following informalities: the examiner notes the use of acronyms (e.g. CPU, IO, SQL, etc.) throughout the specification without first including a description in plain text, as required.

Appropriate correction is required

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 1-48 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

        A. The following claim language is unclear and indefinite:

        (i) As per Claims 1, 17, and 33 line 9, it recites "short-term". It is unclear as to the

size or length of the "short-term". It is uncertain if the short-term monitoring is of only

seconds or minutes or even days.

        (ii) In addition, Claims 1, 17, and 33 line 13, it recites "long-term". It is unclear as

to what size or length of the "long-term". It is uncertain if the long-term monitoring is of

only seconds or minutes or of some significantly longer period. It is also unclear as to

how to differentiate between the ending of a short-term and the beginning of a long-term

of monitoring.

6.   Claims 9, 25, and 41 recites the limitation "SLG" in line 2. There is insufficient

antecedent basis for this limitation in the claim.

7.   Claims 10, 26, and 42 recites the limitation "the maximum PGI" in line 3. There

is insufficient antecedent basis for this limitation in the claim.

8.   Claims 11, 27, and 42 recites the limitation "the maximum PGI" in line 4. There

is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1-8, 10-14, 17-24, 26-30, 33-40 and 42-46 are rejected under 35 U.S.C.

103(a) as being unpatentable over Arnold et al. (US 2004/0243692).

11.   As per Claim 1, Arnold teaches the invention as claimed including a method for

administering the workload of a database system comprising:

        a. sorting the requests into workload groups, each workload group having an

associated level of service desired from the database system (page 4, paragraph 45);

b. executing the requests in an order intended to achieve the levels of service associated with the workload groups (page 1, paragraph 4);

c. assigning system resources to the workload groups as necessary to provide the level of service associated with each group (abstract, lines 14-16); and

d. monitoring on a short-term basis the execution of requests to detect a deviation (page 1, paragraph 7) of the level of service greater than a short-term threshold page 3, paragraph 40) and if a deviation is detected adjusting the assignment of system resources to workload groups to reduce the deviation (page 1, paragraph 2).

12.   Arnold does not explicitly discloses of monitoring on a long-term basis. However, Arnold does disclose of having analysis steps as well as policy manager functions for purposes such as monitoring the availability requirements (page 4, paragraph 41) and repeating the steps of monitoring for the life of the allocation (page 4, paragraph 43).

13.   It would have been obvious to one having ordinary skill in the art at the time of invention to have included monitoring the long-term deviation. Since, Arnold's system is already monitoring repeatedly it is obvious that his system would also perform long-term monitoring over the course of the lifetime of the resource that is running.

14.   As per Claim 2, Arnold further discloses adjusting the CPU and associated IO allocation assigned to each workload group (abstract, lines 1-3).

15.   As per Claim 3, Arnold further discloses dividing the requests into one or more

workload groups (page 4, paragraph 45); and

        assigning service level goals to the workload groups (page 4,paragraph 45).

16.   As per Claim 4, Arnold further discloses mapping the workload groups to a class

depending on the service level goals assigned to each of the workload groups (page 4,

paragraph 45).

17.   As per Claim 5, Arnold further discloses of accepting input from a user (page 2,

paragraph 24); and

        providing guidance to a user (page 2, paragraph 24).

18.   As per Claim 6, Arnold further discloses receiving information regarding the

performance of the system (page 2, paragraph 26); and

        providing guidance to the user based on the received information regarding the

current ability of the system to satisfy service level goals (page 2, paragraph 27).

19.   As per Claim 7, Arnold further discloses of publishing the service level goals to

the system (page 2, paragraph 27).

20.   As per Claim 8, Arnold further discloses monitoring the throughput of requests

assigned to each workload group (page 4, paragraph 45); and

calculating performance goals from throughput for each workload group (page 3, paragraph 40).

21.   As per Claim 10, Arnold further discloses adjusting the assignment of system resources to the workload groups to minimize performance goals (page 3, paragraph 40).

22.   ·As per Claim 11, Arnold further discloses adjusting the assignment of system resources in favor of higher priority workload groups to minimize performance goals (page 3, paragraph 40 & page 4, paragraph 45).

23.   As per Claim 12, Arnold further discloses swapping out a request based on the workload group assignment to free up resources (page 4, paragraph 42 & 45).

24.   As per Claim 13, Arnold further discloses aborting the execution of a request based on workload group assignment (page 4, paragraph 42 & 45).

25.   As per Claim 14, Arnold further discloses delaying execution of a request based on workload group assignment (page 4, paragraph 42 & 45).

26.   As per Claims 17-24 and 33-40, they are rejected for the same reasons as Claims 1-8 above.

27.   As per Claims 26-30 and 42-46, they are rejected for the same reasons as Claims 10-14 above.

28.   Claims 9, 25, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al. (US 2004/0243692) in view of Chung et al. (US 5,675,797).

29.   As per Claim 9, Arnold discloses of monitoring throughput and response time as part of service level goals (page 4, paragraphs 42 & 45). However, Arnold does not explicitly disclose of calculating a performance goal index by taking the response time and dividing it by the response time goal. However, Chung discloses a similar method in which the performance index is determined by dividing the response time by the response time goal (column 5, lines 56-58).

30.   It would have been obvious to one having ordinary skill in the art at the time of the invention to have combined the teachings of Arnold and Chung. Chung's method for calculating a performance index would be suitable to calculate a performance index of the performance metrics in Arnold's system since it is a well-known way of calculating a performance index within the computing arts.

31.   As per Claims 25 and 41, they are rejected for the same reason as Claim 9
above.

32.   Claims 15-16, 31-32, and 47-48 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Arnold et al (US 2004/0243692) in view of Hettish (US
2003/0002649).

33.   As per Claim 15, Arnold discloses the method as in Claim 1 above, but does not
explicitly disclose of logging the deviation greater than the threshold in an error log.
However, Hettish discloses a method in which errors in the system are placed into a log
if they did not meet system criteria (pages 1 & 2, paragraph 16).

34.   It would have been obvious to one having ordinary skill in the art at the time of
the invention to have combined the teachings of Arnold and Hettish. Hettish's error
logging would improve the performance metric tracking in Arnold's system by allowing
the system to keep track of resources that were not meeting the performance metrics
defined by the system.

35.   As per Claim 16, Hettish further discloses of making the error log available for a
user to view (page 7, paragraph 212).

36.   It would have been obvious to one having ordinary skill in the art at the time of

the invention to have Hettish's viewable error log which would allow for the user of

Arnold's system to see which resources were not currently meeting the performance

metrics.

37.   As per Claims 31-32 and 47-48, they are rejected for the same reasons as

Claims 15 and 16 above.

Conclusion

38.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

> a. Chidambaran et al. (US 2005/0038789) On Demand Node and Server
>
> Instance Allocation and De-Allocation.
>
> b. Ullah et al. (US 2004/0021678) Method and Graphical User Interface for
>
> Creating a Configuration File Used Used to Allocate Computer System
>
> Resources Among Workloads.
>
> c. Romero et al. (US 2005/0039183) System and Method for Allocating a Plurality
>
> of Resources Between a Plurality of Computing Domains.

d. McCarthy et al. (US 7,228,546) Dynamic Management of Computer Workloads

Through Service Level Optimization.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Wilser whose telephone number is (571) 270-

1689. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST (Alt Fridays

Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPW

MPW
July 31, 2007

MENG-AL I, AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100